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10/607,914	06/27/2003	Andy Harjanto	13768.604.21	8127

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WORKMAN NYDEGGER/MICROSOFT
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UT 84111

EXAMINER

DAYE, CHELCIE L

ART UNIT PAPER NUMBER

2161

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,914

Applicant(s)

HARJANTO, ANDY

Examiner

Chelcie Daye

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-18, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-18, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is issued in response to applicant's amendment filed on March 28, 2006.
2. Claims 1-23 are presented. Claim 23 was added and claims 14 and 19-21 were cancelled.
3. Claims 1-13, 15-18, and 22-23 are pending.
4. Applicant's arguments with respect to claims 1-13, 15-18, and 22-23 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

Applicant's amendment filed 3/28/2006 with respect to the objections to the drawings has been fully considered. The drawings have been accepted.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-4, 6-11, 13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (US Patent No. 6,016,499) filed July 21, 1997, in view of Van Huben (US Patent No. 6,484,177) filed January 13, 2000.**

Regarding Claim 1, Ferguson discloses a method for providing access to a data repository from an application, wherein the data repository includes any combination of relational databases and directory services, wherein data resident in the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute and wherein the application utilizes object oriented programming that includes an object class and an object property that have a different format than the corresponding at least one schema class and attribute utilized by the repository, the method comprising:

receiving from the application, an access command¹ (column 9, lines 15-19, Ferguson), wherein the access command identifies an object class and an object property of the object class (column 8, lines 3-11, Ferguson). However, Ferguson is silent with respect to an interface interposed between the application and the repository, a format specific to the application and that is different than a format utilized by the repository to define a corresponding schema class and schema attribute, translating, at the interface, the access command to a translated access command, wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and the object property; and transmitting the translated access command to the repository to obtain access to the repository. On the other hand, Van Huben

¹Access command corresponds to either database calls or database language statement.

discloses an interface interposed between the application and the repository (Fig. 1; column 11, lines 11-20, Van Huben), a format specific to the application and that is different than a format utilized by the repository to define a corresponding schema class and schema attribute (columns 1-2, lines 66-67 and 1-11, respectively, Van Huben), translating, at the interface, the access command to a translated access command (column 6, lines 21-39, Van Huben), wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and the object property (column 12-13, lines 49-67 and 1-23, respectively, Van Huben); and transmitting the translated access command to the repository to obtain access to the repository (column 17, lines 10-33, Van Huben). Ferguson and Van Huben are analogous art because they are from the same field of endeavor of translating between SQL statements and a repository interface. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Van Huben's teachings into the Ferguson system. A skilled artisan would have been motivated to combine as suggested by Van Huben at column 1, lines 48-54, in order to provide uniform means for managing any type of data across a large global enterprise. The system allows the means to be applied to data residing in a directory service, a simple file system, or a traditional database, resulting in fewer complications.

Regarding Claim 2, the combination of Ferguson in view of Van Huben, disclose a method wherein translating the access command to a translated access command comprises:

reading a mapping that identifies the object property of the object class (Fig. 3, Ferguson) and links the object property of the object class to the corresponding schema attribute (column 7, lines 53-57, Ferguson); and

modifying the access command by removing a reference to the object property of the object class and by adding to the access command a reference to the schema attribute (column 11, lines 21-36, Van Huben).

Regarding Claim 3, the combination of Ferguson in view of Van Huben, disclose a method wherein the step of translating the access command to a translated access command further comprises altering a format of the command (alter is a synonym for translate; See Merriam-Webster Dictionary) to a different format that the repository is capable of processing to grant access to the repository (column 9, lines 15-24, Ferguson).

Regarding Claim 4, the combination of Ferguson in view of Van Huben, disclose a method wherein the step of translating the access command to a translated access command further comprises employing an application programming interface to process an intermediate command derived from the access command (column 7, lines 5-9, Ferguson).

Regarding Claim 6, the combination of Ferguson in view of Van Huben, disclose a method wherein the repository is an LDAP-compliant directory service (Fig. 5, item 48; column 8, lines 62-66, Ferguson), and wherein the schema is in accordance with the LDAP protocol (column 9, lines 1-3, Ferguson).

Regarding Claim 7, the combination of Ferguson in view of Van Huben, disclose a method wherein the repository is an LDAP-non-compliant² repository (column 8, lines 44-48, Ferguson), and wherein the schema, including the schema class and the schema attribute are implicit within the non-compliant repository (column 7, lines 15-17, Ferguson).

Regarding Claim 8, the combination of Ferguson in view of Van Huben, disclose a method comprising extracting the implicit schema and recording it as an express schema (column 7, lines 15-17, Ferguson).

Regarding Claim 9, the combination of Ferguson in view of Van Huben, disclose a method comprising:

receiving a response from the repository pursuant to transmitting the translated access command to the repository (column 9, lines 37-41, Ferguson),

² Examiner interprets non-compliant to mean "not", therefore by the database being ODBC-compliant it is not an LDAP rendering it non-compliant.

wherein the received response identifies the schema class and schema attribute (column 9, lines 48-57, Ferguson);

translating the received response to a translated response (column 6, lines 21-39, Van Huben), wherein the translated response identifies the object class and object property in a format specific to the application and that is different than a format utilized by the repository to define the corresponding schema class and schema attribute (columns 1-2, lines 66-67 and 1-11, respectively, Van Huben); and

fulfilling the access command received from the application by transmitting the translated response to the application (column 10, lines 50-64, Ferguson).

Regarding Claims 10 and 11, the combination of Ferguson in view of Van Huben, disclose a computer-readable medium having stored thereon computer-executable instructions (column 6, lines 63-67, Ferguson).

Regarding Claim 13, the combination of Ferguson in view of Van Huben, disclose a method wherein transmitting the translated access command to the repository to obtain access to the repository comprises transmitting the translated access command to an intermediary API that transmits a corresponding translated access command to the repository (columns 8-9, lines 59-67 and 1-5, respectively, Ferguson).

Regarding Claim 15, the combination of Ferguson in view of Van Huben, disclose a method wherein the access command is selected from the group consisting of a read command (column 9, lines 15-24, Ferguson), a write command, and a search command.

Regarding Claim 16, the combination of Ferguson in view of Van Huben, disclose a directory interface for providing access to a data repository from an application, wherein the data repository includes any combination of relational databases and directory services, wherein data resident in the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute and wherein the application utilizes object oriented programming that includes an object class and an object property that have a different format than the corresponding at least one schema class and attribute utilized by the repository, the directory interface comprising:

computer-executable instructions for implementing a method that includes:

receiving from the application, at an interface interposed between the application and the repository (Fig.1; column 11, lines 11-20, Van Huben), an access command³ (column 9, lines 15-19, Ferguson), wherein the access command identifies an object class and an object property of the object class (column 8, lines 3-11, Ferguson) in a format specific to the application and that is

³Access command corresponds to either database calls or database language statement.

different than a format utilized by the repository to define a corresponding schema class and schema attribute (columns 1-2, lines 66-67 and 1-11, respectively, Van Huben);

translating, at the interface, the access command to a translated access command (column 6, lines 21-39, Van Huben), wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and the object property (column 12-13, lines 49-67 and 1-23, respectively, Van Huben); and

transmitting the translated access command to the repository to obtain access to the repository (column 17, lines 10-33, Van Huben).

Regarding Claim 17, the combination of Ferguson in view of Van Huben, disclose a directory interface wherein translating the access command is performed by an application programming interface (column 7, lines 3-11, Ferguson).

Regarding Claim 18, the combination of Ferguson in view of Van Huben, disclose a directory interface wherein the repository is LDAP-compliant and wherein the application programming interface of the repository interface comprises an LDAP API (column 8, lines 62-67, Ferguson).

7. Claims 5 and 12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (US Patent No. 6,016,499) filed July 21, 1997, in view of Van Huben (US Patent No. 6,484,177) filed January 13, 2000, and further in view of Srinivasan (US Patent No. 6,587,856) filed December 7, 1998.

Regarding Claim 5, the combination of Ferguson in view of Van Huben, disclose a method of reading the mapping that identifies the object property of the object class (Fig. 3, Ferguson) links that object property of the object class to the schema attribute (column 7, lines 53-57, Ferguson). However, the combination of Ferguson in view of Van Huben, do not explicitly disclose where the object class is defined by a class definition having therein a definition of the object property, and at least one metadata tag associated with the definition of the object property. On the other hand, Srinivasan discloses where the object class is defined by a class definition (column 8, lines 45-51, Srinivasan) having therein a definition of the object property (column 8, lines 31-36, Srinivasan), and at least one metadata tag associated with the definition of the object property (column 7, lines 4-9, Srinivasan). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Srinivasan's teachings into the Ferguson in view of Van Huben system. A skilled artisan would have been motivated to combine in order to guarantee that all of the associated information was properly retrieved. Allowing a class to have a definition, which has its attributes definitions connected, assures that the metadata, which is

associated with both the class and attributes are linked accordingly. As a result, this leads to a more productive and accurate system.

Regarding Claim 12, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, discloses a computer-readable medium having stored thereon computer-executable instructions (column 6, lines 63-67, Ferguson).

8. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (US Patent No. 6,016,499) in view of Glebov (US Patent No. 6,343,265).

Regarding Claim 22, Ferguson discloses a mapping tool embodied on a computer-readable medium for associating a property of a class with an attribute of a schema class of a repository schema, the mapping tool comprising:

computer-executable instructions (column 6, lines 63-67, Ferguson).

However, Ferguson does not explicitly disclose wherein the computer-executable instructions are for

presenting a first graphical user interface for user-selection of selectable object classes to be mapped to selectable schema classes and for receiving a user selection of at least one selectable object class and at least one selectable schema class from the graphical user interface;

presenting a second graphical user interface for user-selection of at least one selectable property of a selected object class and at least one selectable attribute of a selected schema class and for receiving a user selection of a selected object property and a selected schema attribute; and

annotating a definition of the selected object class with metadata associating the selected object property with the selected schema attribute in response to receiving a user selection of the selected object property and the selected schema attribute. On the other hand, Glebov discloses wherein the computer-executable instructions are for presenting a first graphical user interface (Fig. 5, Glebov) for user-selection (column 5, lines 24-31, Glebov) of selectable object classes to be mapped to selectable schema classes (column 5,

lines 44-63, Glebov) and for receiving a user selection of at least one selectable object class and at least one selectable schema class from the graphical user interface (columns 7-8, lines 64-67 and 1-10, respectively, Glebov);

presenting a second graphical user interface (Fig.6, Glebov) for user-selection (column 5, lines 24-31, Glebov) of at least one selectable property of a selected object class and at least one selectable attribute of a selected schema class (column 6, lines 17-37, Glebov) and for receiving a user selection of a selected object property and a selected schema attribute (columns 7-8, lines 64-67 and 1-10, respectively, Glebov); and

annotating a definition of the selected object class with metadata (column 4, lines 51-54, Glebov) associating the selected object property with the selected schema attribute (column 4, lines 60-62, Glebov) in response to receiving a user selection of the selected object property and the selected schema attribute (column 8, lines 7-10, Glebov). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Glebov's teachings into the Ferguson system. A skilled artisan would have been motivated to do so in order to permit the user to be in charge of selecting a class as well as an attribute they wish to retrieve. As a result, the user determines what information is gathered and what information is delivered for the end result.

Regarding Claim 23, the combination of Ferguson in view of Glebov, disclose a mapping tool wherein the second graphical user interface is only

presented after first receiving user input selecting said at least one selectable object class and said at least one selectable schema class from the graphical user interface (columns 6-7, lines 58-67 and 1-4, Glebov).

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

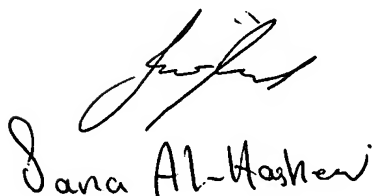
Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
Technology Center 2100
June 4, 2006



Jana Al-Hashemi